

Amendments to The Claims:

1. (Currently amended): ~~A~~ An autonomic computer system method for autonomic computing using a relational grammar, the method comprising the steps of:

a computer program reading an autonomic relational grammar from memory, the autonomic relational grammar comprising a plurality of program statements, ~~the autonomic relational grammar~~ program statements comprising one or more lexical token statements, one or more category statements and a rule, the rule comprising one or more relationship statements and the rule further comprising one or more autonomic action statements, wherein a rule comprises the one or more relationship statements and the one or more autonomic action statements;

the computer program sensing a change in an input value related to a first token identified by a first lexical token statement of the one or more lexical token statements;

the computer program parsing the input value with the relational grammar to form an autonomic derivation tree, the autonomic derivation tree comprising the first token, a first category, a first relationship and an autonomic action;

the computer program using the derived autonomic derivation tree to identify the autonomic action to be performed; and

the computer program performing the identified
autonomic action, the autonomic action comprising any one
of:

_____ configuring the computer system;

_____ optimizing functionality of the computer
system;

_____ recovering the computer system from a
malfunction; or

_____ protecting an environment of the computer
system.

2. (Currently amended): The method according to claim 1, further
comprising any one of:

_____ the computer program changing the input value
related to the first token if an attribute is instantiated at
initialization time; or

_____ the computer program changing the input value
related to the first token if there is a change in a value of the
first token wherein the change in the input value is any one of
the result of an instantiation of an attribute at initialization
time or a change in a value of the first token.

3. (Previously presented): The method according to claim 1
wherein the rule further comprises a second category statement
and wherein the derivation tree further comprises a second
category.

4. (Previously presented): The method according to claim 1
wherein the rule further comprises a second lexical token
statement and wherein the derivation tree further comprises a
second token.

5. (Previously presented): The method according to claim 1 wherein the relationship statements further comprise any one of a system attribute or the relationship between any one of the first category or the first token and any one of a third category or a third token.

6. (Previously presented): The method according to claim 1 wherein the relational grammar further comprises a plurality of rule statements for defining a second rule.

7. Cancel

8. (Currently amended): The method according to claim 1 comprising the further steps of:

the computer program determining resource objects and constraints;

the computer program solving the constraints to form a constraint solution for the resource objects; and

the computer program using the constraint solution to identify the autonomic action to be performed.

9. Cancel

10. (Currently amended): A system for autonomic computing using a relational grammar, the system comprising:

a network;

a computer system in communication with the network, wherein the computer system includes instructions to execute a method comprising:

a computer program reading an autonomic relational grammar from memory, the autonomic relational grammar comprising a plurality of program statements, ~~the autonomic relational grammar~~ program statements comprising one or more lexical token statements, one or more category statements and a rule, ~~the rule comprising one or more relationship statements and the rule further comprising one or more autonomic action statements,~~ wherein a rule comprises the one or more relationship statements and the one or more autonomic action statements;

the computer program sensing a change in an input value related to a first token identified by a first lexical token statement of the one or more lexical token statements;

the computer program parsing the input value with the relational grammar to form an autonomic derivation tree, the autonomic derivation tree comprising the first token, a first category, a first relationship and an autonomic action;

the computer program using the derived autonomic derivation tree to identify the autonomic action to be performed; and

the computer program performing the identified
autonomic action, the autonomic action comprising any one
of:

configuring the computer system;

optimizing functionality of the computer
system;

recovering the computer system from a
malfunction; or

protecting an environment of the computer
system.

11. (Currently amended): The system according to claim 10,
further comprising any one of:

the computer program changing the input value
related to the first token if an attribute is instantiated at
initialization time; or

the computer program changing the input value
related to the first token if there is a change in a value of the
first token wherein the change in the input value is any one of
the result of an instantiation of an attribute at initialization
time or a change in a value of the first token.

12. (Previously presented): The system according to claim 10
wherein the rule further comprises a second category statement
and wherein the derivation tree further comprises a second
category.

13. (Previously presented): The system according to claim 10
wherein the rule further comprises a second lexical token
statement and wherein the derivation tree further comprises a
second token.

14. (Previously presented): The system according to claim 10 wherein the relationship statements further comprise any one of a system attribute or the relationship between any one of the first category or the first token and any one of a third category or a third token.

15. (Previously presented): The system according to claim 10 wherein the relational grammar further comprises a plurality of rule statements for defining a second rule.

16. Cancel

17. (Currently amended): The system according to claim 10, wherein the method further comprises:

the computer program determining resource objects and constraints;

the computer program solving the constraints to form a constraint solution for the resource objects; and

the computer program using the constraint solution to identify the autonomic action to be performed.

18. Cancel

19. (Currently amended): A computer program product for autonomic computing using a relational grammar, the computer program product comprising:

a computer readable medium having computer readable program code therein for performing a method comprising:

a computer program reading an autonomic relational grammar from memory, the autonomic relational grammar comprising a plurality of program statements, ~~the autonomic relational grammar program statements comprising~~ one or more lexical token statements, one or more category statements ~~and a rule, the rule comprising one or more~~ relationship statements ~~and the rule further comprising one or more autonomic action statements, wherein a rule comprises the one or more relationship statements and the one or more autonomic action statements;~~

the computer program sensing a change in an input value related to a first token identified by a first lexical token statement of the one or more lexical token statements;

the computer program parsing the input value with the relational grammar to form an autonomic derivation tree, the autonomic derivation tree comprising the first token, a first category, a first relationship and an autonomic action;

the computer program using the derived autonomic derivation tree to identify the autonomic action to be performed; and

the computer program performing the identified
autonomic action, the autonomic action comprising any one
of:

configuring the computer system;

optimizing functionality of the computer
system;

recovering the computer system from a
malfunction; or

protecting an environment of the computer
system.

20. (Currently amended): The computer program product according to claim 19, further comprising any one of:

the computer program changing the input value
related to the first token if an attribute is instantiated at
initialization time; or

the computer program changing the input value
related to the first token if there is a change in a value of the
first token wherein the change in the input value is any one of
the result of an instantiation of an attribute at initialization
time or a change in a value of the first token.

21. (Previously presented): The computer program product according to claim 19 wherein the rule further comprises a second category statement and wherein the derivation tree further comprises a second category.

22. (Previously presented): The computer program product according to claim 19 wherein the rule further comprises a second

lexical token statement and wherein the derivation tree further comprises a second token.

23. (Previously presented): The computer program product according to claim 19 wherein the relationship statements further comprises any one of a system attribute or the relationship between any one of the first category or the first token and any one of a third category or third token.

24. (Previously presented): The computer program product according to claim 19 wherein the relational grammar further comprises a plurality of rule statements for defining a second rule.

25. Cancel

26. (Currently amended): The computer program product according to claim 19, wherein the method further comprises:

the computer program determining resource objects and constraints;

the computer program solving the constraints to form a constraint solution for the resource objects; and

the computer program using the constraint solution to identify the autonomic action to be performed.

27. Cancel